

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (Currently Amended) ~~A~~Circuit for driving a semiconductor laser, in particular a vertical cavity surface-emitting laser, comprising a differential amplifier for driving the semiconductor laser directly, wherein

a semiconductor laser to be connected to the circuit is differentially driven by means of the differential amplifier,

a first output of the differential amplifier being direct-current-coupled to a first terminal of the semiconductor laser and

a second output of the differential amplifier being alternating-current-coupled to a second terminal of the semiconductor laser.

2. (Currently Amended) ~~A~~Circuit according to Claim 1, wherein the second output of the differential amplifier is connected to the second terminal of the semiconductor laser by means of a capacitor, a coil and a resistor being connected in series to ground between the capacitor and the second terminal.

3. (Currently Amended) ~~A~~Circuit according to Claim 1, wherin variable resistors are connected in parallel with the resistors of the differential amplifier.

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4. (Currently Amended) A circuit according to Claim 2, wherein a series connection of a further coil, two diodes and a further resistor connected to ground is provided between the second output of the differential amplifier and the capacitor.

5. (Currently Amended) A circuit according to Claim 1, wherein digital-to-analogue converters are provided at least for the inputs of the differential amplifier and of a control input of the constant-current source.

6. (Currently Amended) A circuit according to Claim 5, wherein the circuit comprises a microprocessor for executing a program for driving the semiconductor laser and/or setting the circuit.

7. (Currently Amended) A circuit according to Claim 1, wherein the circuit comprises the semiconductor laser, which is, in particular, a semiconductor diode, the anode of the laser diode being the first terminal of the semiconductor laser and the cathode of the laser diode being the second terminal of the semiconductor laser.

8. (Currently Amended) A circuit according to Claim 7, wherein the circuit and the semiconductor laser are disposed on spatially separated integrated circuits, impedance-matched lines of the circuit being provided for connecting the semiconductor laser to the circuit.

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9. (Currently Amended) A Method of operating a circuit according to Claim 1, wherein the circuit is matched to the semiconductor laser used under the control of specified events,

wherein characteristic-curve data of the semiconductor laser are first measured by means of the circuit,

at least one start-up value of the circuit is determined and set on the basis of the measured data and

circuit operating values for operating the circuit comprising said semiconductor laser are determined and set by varying the start-up value at least as a function of a desired characteristic quantity of the semiconductor laser.

10. (Currently Amended) A Method according to Claim 9, wherein at least an initial or repeat start-up, a replacement of the semiconductor laser, a specified number of operating hours or an occurrence of a fault is an event in the context of the specified events.

11. (Currently Amended) A circuit for driving a semiconductor laser according to claim 4, in particular a vertical cavity surface emitting laser, said circuit comprising a differential amplifier for driving the semiconductor laser either directly or in differential mode, said differential amplifier including a first output terminal direct-current (DC) coupled to a first terminal of the semiconductor laser and a second output terminal alternating-current (AC) coupled to a second terminal of the semiconductor laser, whereby said semiconductor laser is

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differentially driven when an output signal of said differential amplifier across said first and second outputs terminals is an AC signal and is driven in a single-ended mode when said output signal is a DC signal wherein the semiconductor laser is driven differentially for AC mode and the semiconductor laser is driven single ended for DC mode.